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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SAMANTHA CHAMP,
HANS-JOACHIM HÄHNLE, MARTIN BECK, AND
RUDIGER FUNK

Appeal 2009-003713
Application 10/502,212
Technology Center 1700

Decided: March 24, 2010

Before BRADLEY R. GARRIS, CHARLES F. WARREN, and
MARK NAGUMO, *Administrative Patent Judges*.

NAGUMO, *Administrative Patent Judge*.

DECISION ON APPEAL

A. Introduction[1]

Samantha Champ, Hans-Joachim Hähnle, Martin Beck, and Rudiger Funk ("Champ") timely appeal under 35 U.S.C. § 134(a) from the final rejection[2] of claims 1-10, 12-17. We have jurisdiction under 35 U.S.C. § 6. We REVERSE.

The subject matter on appeal relates to water-absorbing polymer foams said to be useful for various hygienic articles and the like. The polymers are formed from monomers having basic groups. The claims have been amended to exclude acid monomers from the basic polymers.

Representative Claim 1 is reproduced from the Claims Appendix to the Principal Brief on Appeal:

> 1. A water-absorbing basic polymer foam prepared by
>
> (I) foaming a crosslinkable aqueous mixture including
>
> (a) at least one basic polymer whose basic groups have optionally been neutralized, *said basic polymer free of acid monomers*,
>
> (b) at least one crosslinker,
>
> (c) at least one surfactant,
>
> (d) optionally at least one solubilizer,

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[1] Application 10/502,212, *Foams Made From Water-Absorbing, Basic Polymers, Method for the Production and Utilization Thereof*, filed 20 July 2004 as the National stage of an international application filed 30 January 2003, claiming the benefit of a German application filed 6 February 2002. The specification is referred to as the "212 Specification," and is cited as "Spec." The real party in interest is listed as BASF Ag. (Appeal Brief, filed 4 June 2008 ("Br."), 2.)

[2] Office action mailed 18 October 2007 ("Final Rejection"; cited as "FR").

(e) optionally thickeners, foam stabilizers, fillers, fibers, cell nucleators, and mixtures thereof and

(f) optionally particulate water-absorbing acidic polymers,

by dissolving a gas which is inert toward free radicals in the crosslinkable aqueous mixture under a pressure from 2 to 400 bar and subsequently decompressing the crosslinkable aqueous mixture to atmospheric

or

by dispersing fine bubbles of a gas which is inert toward free radicals, and

(II) crosslinking the foamed mixture to form a hydrogel foam and

optionally adjusting a water content of the polymer foam to 1-60% by weight.

(Br., Claims App. A1; paragraphing, indentation, and emphasis added.)

Claim 8, the other independent claim, covers a process of making a water-absorbing basic polymer foam that tracks the process recited in claim 1.

The Examiner has maintained the following grounds of rejection:[3]

A. Claims 1-10 and 12-17 stand rejected under 35 U.S.C. § 112(1) for lack of an adequate written description of the limitation "free of acid monomers."

B. Claims 1-10 and 12-17 stand rejected under and 35 U.S.C. § 103(a) in view of the combined teachings of Hänle[4] and Riegel.[5]

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[3] Examiner's Answer mailed 29 July 2008 ("Ans."), at 3 and 4.

Champ argues (Br. 14-16) that the Examiner has failed to give proper weight to the disclosure that the comonomers that are polymerized to form the polymer are "preferably free of acid groups" (Spec. 5, ll. 20-30) and the general description of the basic polymers (Spec. 3, l. 32 to 9, l. 37) and the 15 working examples that show, in Champ's view, that the exclusion of acid monomers was adequately described in the original specification.

Champ argues that the Examiner erred in holding that it would have been obvious to employ the polymer systems of Riegel in the preparations of Hänle (FR para. bridging 3-4; Ans. 5) because the polymers described by the two references are not equivalent materials. (Br. 17.) In particular, according to Champ, the polymer mixtures described by Riegel cannot be foamed. (*Id.*) Rather, Riegel relates to blends of an acidic polymer with a basic polymer to form hydrogels. (*Id.* at 24, last para.) Champ concludes that neither Hänle nor Riegel provides a reason or incentive to make basic polymer foams.

According to Champ, claim 8, which covers the process of making the films, differs not only in the required basic, acid-free polymer, but in the process steps, which require foaming the polymer, then cross-linking the

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[4] WO 99/44648 (1999). The Examiner relies on Hans-Joachim Hänle et al., *Water-Absorbing, Cross-Linked Polymerizates in the Form of a Foam, a Method for the Production Thereof, and Their Use*, U.S. Patent 6,455,600 B1 (2002) as a translation of the German document. Champ agrees that this use is proper. (Br. 17.)

[5] WO 00/63295 (2000). The Examiner relies on Ulrich Riegel et al., *Hydrogel-Forming Polymer Mixture*, Canadian Patent Application 2,370,380 (2002) as a translation of the German document. Champ agrees that this use is proper. (Br. 20.)

foam. (Br. 32.) In contrast, according to Champ, Hänle describes foams of acidic polymers that are made by mixing required acidic monomers with optional other monomers and cross-linking monomers, foaming the mixture, and then polymerizing the foam. (*Id.* at 22; 32.) Champ argues that the Examiner has failed to show any reason to modify the process disclosed by Hänle to arrive at the process covered by claim 8. (*Id.* at 22.)

B. Discussion

Findings of fact throughout this Opinion are supported by a preponderance of the evidence of record.

As our reviewing court has re-emphasized, "the hallmark of written description is disclosure." *Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.*, 2008-1248, slip op. 24 (Fed. Cir. 22 March 2010) (en banc). As the court explained, the test for an adequate written description "requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed." (*Id.*) Whether the written description requirement is met is a question of fact. (*Id.*)

The basic polymers of the invention are described in the 212 Specification as containing, for example, "from 95 to 5 mol% . . . of at least one N-vinylcarboxamide, and from 5 to 95 mol% . . . of other monoethylenically unsaturated monomers copolymerizable therewith in copolymerized form. *The comonomers are preferably free of acid groups.*" (Spec. 5, ll. 20-30; emphasis added.) As Champ points out (Br. 14-16), and

as the Examiner does not contest, the 212 Specification does not describe expressly, in general or in particular, any basic copolymer that contains an acid group.

The initial inquiry is into the meaning of the emphasized phrase in the limitation, "at least one basic polymer whose basic groups have optionally been neutralized, *said basic polymer free of acid monomers*." Champ has argued throughout that the basic polymers used in the claimed polymer foam are not made from monomers that contain acid groups. The Examiner has not contested this meaning. Although strict parsing of the phrase and comparison with the carefully worded descriptions in the specification[6] indicates that the choice of the word "monomers" was not quite accurate (polymers are made from monomers—they do not "contain" monomers as part of their chemical structure, although residual monomers may be physically trapped, etc., in the polymer matrix), the record as a whole indicates that a chemist of ordinary skill would have recognized that what Champ argues is what was intended to be claimed.

We do not perceive any reasonable way to read the passage at page 5, quoted *supra*, as other than identifying a preferred class of polymers as being formed from comonomers that are free of acid groups. The rest of the 212 Specification is consistent with this reading. The preponderance of the evidence supports Champ's argument that the "free of acid monomer"

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[6] *See, e.g.*, "[w]ater-absorbing, predominantly open-celled foams *based on* crosslinked acid-functional monomers are known" (Spec. 1, ll. 11-12; emphasis added); "[u]seful basic polymers include for example polymers containing vinyl amine *units*, polymers containing vinylguanidine *units*, . . ." (*id.* at 3, ll. 34-35; emphasis added).

limitation is described in the originally filed specification. We therefore REVERSE the rejection for new matter.

As Champ points out (and the Examiner does not contest), Hänle requires the presence of acid monomers, and Riegel requires the presence of a cross-linked acidic polymer and a cross-linked basic polymer. The substitution of "the polymer systems" of Riegel for those of Hänle would not result in a "polymer free of acid monomers" as we have construed that limitation. Moreover, the preponderance of the evidence of record supports Champ's argument that the cross-linked polymers described by Riegel cannot be foamed. An inoperative combination of the prior art cannot serve as the basis for a proof that claimed subject matter would have been obvious. The Examiner's belated "analogous art" arguments (Ans. 7-8) fail to establish that persons skilled in the art would have recognized any functional equivalence of the cross-linked polymers described by Riegel and those described by Hänle that would have led such persons to combine the teachings as proposed by the Examiner. The Examiner's rejection of claim 1 and the dependent claims, drawn to foams, is REVERSED.

Although the Examiner did not present a distinct rejection of claim 8, which covers a process of making foams covered by claim 1, Champ argues that, in addition to the Examiner's failure to show that the required polymers would have been obvious over the prior art, the Examiner also failed to show that the recited process steps would have been obvious. (Br. 32.) The preponderance of the evidence of record supports Champ on both issues. The rejection of claim 8 and the dependent claims is therefore REVERSED.

D. Order

We REVERSE the rejection of claims 1-10 and 12-17 under 35 U.S.C. § 112(1).

We REVERSE the rejection of claims 1-10 and 12-17 under 35 U.S.C. § 103(a) in view of the combined teachings of Hänle and Riegel.

REVERSED

tc

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